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AUTHOR Gunderson, Lee; Murphy, Sandra
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ABSTRACT

A study examined (1) developmental differences in the writing of urban students, (2) the syntactic complexity associated with differing modes of written discourse, and (3) the relationship among grade level, mode of discourse, and writing quality. Subjects were approximately 1,200 second, fifth, eighth, and eleventh grade students from large metropolitan schools that had mean scores in total reading below the fiftieth percentile on the Comprehensive Test of Basic Skills and were receiving Elementary and Secondary Education Act funding. The subjects each completed descriptive, argumentative, and narrative writing tasks. Writing samples of 20 randomly chosen subjects at each grade level were selected for analysis. Of these students, approximately 17% were Spanish surnamed, 24% Black, 12% Filipino, 20% Asian, 18% White, and 9% other. The writing samples were scored for total number of words, number of t-units, and quality, holistically determined. Results showed that over the four grades and three discourse modes, the number of words and t-units increased mathematically. For all grades and modes there was a high degree of association between quality and number of words. Eighth and eleventh grade students produced significantly more words per t-unit than did second and fifth grade students, and the three discourse modes did not differ in syntactic complexity as measured by analysis of variance. (FL)

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Developmental Characteristic of the Writing of Urban Students at Grades 2, 5, 8, and 11

Lee Gunderson

The University of British Columbia

Sandra Murphy

The University of California, Berkeley

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Sandra Murphy

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Introduction

Developmental differences in writing have been frequently observed (Blount, Johnson, & Frederick, 1968; Braun & Klassen, 1973; Hunt, 1965; Loban, 1976; O'Donnell, Griffin, & Norris, 1967; Veal, 1974). One consistently replicated finding is that syntactic complexity as measured by mean T-unit increases with age. One drawback to the research is that it is seldom conducted with students below third grade. Hunt (1965) states, "Before the fourth grade, children may jabber away with ease, fluency, and exuberance, but most third graders write only under considerable duress" (Hunt, 1965, p.8). Loban (1981) adds, "I found it most difficult to persuade second grade children to write at all." The bulk of writing research has involved students above the third grade level.

Differences in the nature of the writing task have been found to affect syntactic complexity. Crowhurst & Piche (1979) showed that at two different grade levels (6 and 8) argument was more syntactically complex than description. This finding is in accord with Perron (1977), Rosen (1969), and San Jose (1972). Crowhurst & Piche (1979) propose that constructing an argument produces higher syntactic complexity because, "...high syntactic complexity in argument is a function of the essential nature of argument" (Crowhurst & Piche, 1979, p. 107).

The association of development and discourse mode with quality of writing product has been investigated. Crowhurst (1980) found that high quality arguments produced by 10th and 11th grade subjects were more syntactically complex than low quality arguments. She did not find this association in the written products of sixth grade subjects. It has been shown repeatedly that there is an association between quality and syntactic complexity (Diederich, French, & Carlton, 1961; Gebhard, 1978; Nold & Freedman, 1977; Richardson, Calnan, Essen, & Lambert, 1976; Stewart & Grobe, 1979). Lack of association between quality and syntactic complexity has also been noted. Stewart & Grobe (1979) found no association between quality and syntactic complexity at grades 8 and 11. Others have found little or no relationship between quality and syntactic complexity (Gebhard, 1978; Schmeling, 1970).

Purpose of the Study

The present study was conducted in order to study 1) developmental differences in the writing of urban students, 2) the syntactic complexity associated with differing modes of written discourse (narration, argument, and description), and 3) the relationship between grade level, mode of discourse, and quality.

In the past studies have not extensively observed "inner city" or urban school subjects. Many studies have included "lower socioeconomic" groups. For example, Loban (1966)

indicates that his sample includes subjects, "...from definitely poor ecoromic circumstances ..." (Loban, 1966, p. 4). To date, no study appears to have investigated developmental differences in the writing of "inner city urban students."

The present study is unique in several features. It involves, 1) the writing of very young subjects (2nd graders), 2) the writing of inner city subjects, 3) differences related to quality, and 4) developmental differences in response to mode of discourse relative to quality. It is predicted that the level of syntactic complexity will increase developmentally and that there will be differences related to mode of discourse with argument and description producing higher levels of syntactic complexity than narration. Finally, it is predicted that high quality writing products will have higher levels of syntactic complexity than low quality writing products.

Method

Subjects

Subjects were from a large metropolitan school district in the Western United States. They were selected randomly from three high schools, four middle schools, and ten elementary schools at grades 2, 5, 8, and 11. All subjects were asked to write three compositions at one week intervals. Order of writing tasks was random for classrooms. Each of the participating schools had mean scores in total reading on the Comprehensive Test of Basic Skills (CTBS) below the 50th percentile and were

receiving E.S.E.A. funding. Three hundred eleven 11th grade subjects, 321 eighth grade subjects, 309 fifth grade subjects and 268 second-grade subjects wrote one or more of the three tasks. Forty-three percent of the subjects wrote all three of the tasks. Make-up sessions were not held. A random sample of 20 subjects at each grade level was selected from the 43% who had written all three products. The sample consisted of approximately 17% Spanish surnane, 24% Black, 12% Filipino, 20% Asian, 18% white and 9% other (e.g. east Indian). Approximately 22% were bilingual. These percentages are close to the population percentages of the schools in the sample and the district at large.

Writing Tasks

Subjects at all grade levels had forty minutes to write each task. The three writing assignments were: 1) description- "We all know someone who is special. People can be special or important in many different ways. Please describe a person who is special to you.", 2) argument- "Pretend your very best friend has just started smoking for the first time and you have decided to write him or her a letter. Since you know smoking is not good for your friend, you must try to get her or him to stop. You are going to do this by writing a letter.", and 3) narration - "Look carefully at the three pictures. Please write a story about these three pictures. Tell what is going on in each picture.

Remember the three pictures go together to make one story."[1]

Each subject was given a booklet to write each task in. The writing assignment was printed on the first page. The teacher read aloud each assignment. Subjects were encouraged to try and spell words if they could, but were told they would not be given any help on spelling. A total of forty minutes was given for each writing task.

Scoring

The 240 writing products were scored for total number of words, number of T-units, and quality. Quality was judged by three paid trained holistic scorers who rated each product from 1 (very poor) to 5 (very good). Each rater was given a set of photocopies of the writing products and scored according to within-grade reference so that products were not judged relative to other grade levels. The three independent scores were combined to produce a quality index varying from 3 to 15.

Results

Mean quality index varied from 7.15 for description produced by 2nd grade subjects to 8.55 for argument produced by 8th grade subjects. Thirty-six percent of the writing products were rated the same by all three scorers. Inter-rater reliability was 91%. Means and standard deviations of quality index are shown in Table 1.

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[1]Narration stimulus is shown in the appendix.

Table 1 about here

As noted earlier, quality index is relative to grade level and sample. The 8th grade subjects produced higher quality writing products for their grade level than did subjects at other levels.

The number of words produced varied from a mean of 31.25 for second grade narration to a mean of 131.05 for 11th grade description. These means are shown in Table 2.

Table 2 about here

Correlation coefficients were calculated for the association of words and quality of discourse for each discourse type at each grade level. These varied from .80 to .91 and are reported in Table 3.

Table 3 about here

Overall there is an extremely high degree of association between quality and number of words for all levels and all discourse types. Essays containing more words were of higher quality than essays of fewer words.

The number of T-units for each discourse at each grade level was counted and is shown in Table 4. These vary from a mean of 5.25 for narration produced by 2nd grade subjects to a mean of 16.4 produced by 11th grade subjects writing argument.

Table 4 about here.

Syntactic complexity as measured by the number of words per T-unit (W/T) was calculated for each discourse type at each grade level and is reported in Table 5. Syntactic complexity varies from 5.89 for 2nd grade narration to 9.7 for 8th grade argument.

Table 5 about here

The association of syntactic complexity and quality was computed for all discourse types for all grade levels. These correlation coefficients are reported in Table 6 and vary from -.22 for 5th grade argument to .52 for 2nd grade description.

Table 6 about here

The W/T attained by subjects on the three discourse types were analyzed by an Analysis of Variance for a Repeated Measure design with k=3 treatments. The cell means procedure was used for logistical reasons even though it tends to produce lower F

ratios than the more sophisticated model (See Marascuilo & Levin, 1970).

Significant effects at alpha .05 were found due to Quality $F(12,222)= 2.66$ and Grade $F(3,76)=5.44$. Effects due to discourse mode were not significant. The ratio of the smallest to the largest variance (.88 and 56.25) is 63.93 and represents a violation of the assumption of equality of variance. The 8th grade argument scores were eliminated and the ANOVA was run again resulting in no difference in results. Since the sample sizes are the same the Welch-Aspin model for contrasts was used when they involved the 8th grade mean for argument (Scheffe, 1959).

Post hoc comparisons of grade level W/T means showed that 2nd and 5th grade means were not significantly different while each was significantly different than both 8th and 11th grade means. Mean scores of 8th and 11th grade subjects were not significantly different. Post hoc comparisons were not made of W/T per rating, instead correlations of quality and W/T were computed and are shown in Table 6.

Table 6 about here

Discussion

Over the four grades and three discourse modes the number of words and the number of T-units increases mathematically. For

all grades and discourse modes there is a high degree of association between quality and number of words. The relationship between quality and number of words has been noted before (Diederich, French, & Carlton, 1961; Gebhard, 1978; Stewart & Grobe, 1979). The mean number of T-units also increased mathematically from one grade level to the next and showed mode of discourse differences. These differences were not tested for significance.

It was predicted that syntactic complexity would increase developmentally. Over the three writing samples the 8th and 11th grade subjects produced significantly higher W/T means than did both the 2nd and 5th grade subjects. There were no significant differences between 2nd and 5th grade means and 8th and 11th grade means.

It was predicted that there would be differences in syntactic complexity related to mode of discourse and quality with argument and description producing higher levels of syntactic complexity than narration. The three discourse types did not differ in syntactic complexity as measured by ANOVA. There were, however, significant differences in W/T due to quality. There were significant correlations between quality and W/T for 2nd and 5th grade description and 5th, 8th, and 11th grade narration. These are surprising results that run counter to past findings (Crowhurst, 1980; Potter, 1967; Veal, 1974). To understand the nature of this seeming descrepancy it is necessary

to consider some writing samples.

Subjects in this study wrote a narrative to describe what was happening in a series of pictures. These narrations can be best described as "stimulus bound" in that subjects (especially the younger ones) narrated with little or no description and as noted by Witte & Davis (1980, p. 13), "...it is virtually impossible to write a good narrative without including some description." Subjects who added description produced the highest quality writing products resulting in the correlation between syntactic complexity and quality.

2nd Grade Narration (Quality=3)

He is comeeing in the room and he is openeing the box

5th Grade Narration (Quality=3)

The boy went into the room and opened the box to see what was init and looked inside. Then he closend the box and left the room.

8th Grade Narration (Quality=3)

The boy is coming into the room. He looks and he see a box. He opened the box and looked inside. Then he closes the box, then he pick it up and leaves the room.

11th Grade Narration (Quality=3)

Bob is helping his mom to get the things inside the big box. He opens it and check to see if everything's there. Then he pick it up and brings it to her mom who is waiting in the car for him.

Compare the low quality 11th grade narration with an excerpt from one of good quality (judged to be 14).

Excerpt- 11th Grade Narration

It was a strange Saturday morning when everything was going wrong for Harold. The sky was dark and rain was starting to pour down from the sky. Harold was planning on going out to the playground with some of his friends, but now he wont be able to.

The low quality narration has a W/T of 8.0 while the high quality product has a ratio of 12.08 to one. As noted previously, the association of quality and W/T in narration for 2nd grade subjects is 0. The low quality 2nd grade narration cited above contained 12 words and 2 T-units while the high quality product below contains 46 words and 9 T-units.

2nd Grade Narration (Quality=15)

The man walked in the room. He saw a box. He opened the box. There was a surprise for his birthday. It was a nice shirt. His wife gave it to him. Then he took it to his wife, and he says, "thank you very much."

The W/T for the low quality product is 6 while the W/T for the high quality product is 5.1. Overall, the inner-city subjects in this study produced narrations that were stimulus bound. Their narrations tended to be "racetrack commentaries" rather than developed narratives. Those products which were more

elaborated were judged to be of higher quality, hence, the association of syntactic complexity and quality for 5th, 8th, and 11th graders.

It is not surprising that higher quality narrations were associated with higher levels of syntactic complexity given the task and the characteristics of the response of the inner-city subjects in the study. That there were no significant differences in syntactic complexity between description, argument, and narration is a surprise. Crowhurst (1982) reported that she found it difficult to persuade 6th grade subjects to produce argument. She indicates that they tended to simply produce "stories" rather than argument. The following selections reveal the narrative character of both argument and description

2nd Grade (Quality=4)

> My father staerted smokeing alongtime age he had a stroke they rushed him to the hospital and He was all right and He had sveilal strokes

11th Grade (Quality=4)

> Dear Tom,
> I was walking home from school when I saw you was smoking, I wont tell your father about it, If you stop smoking, smoking is bad for you, and if you keep smoking you will get sick, and will get cancer. I am your best friend. I tell you this is good for you.

The "arguments" produced by subjects in this study tended to be more descriptive/narrative than argumentative. Indeed, the

arguments and the descriptions are both extremely narrative in character. A typical description involves a narrative-like structure, for example;

Excerpt- 11th Grade Description (Quality=7)

> My mother is a very special person to me. She is kind and makes friends with all the people. Sometimes when there is a problem, she sits and listens to what I say. We both cooperate and try to solve the problem or problems we face. Not that she only helps me but helps other people too. When I come back from school and have many homework and lots of tests, she doesn't distrub me at all.

No differences between description, argumentation, and narration in W/T were found because inner-city students tend to produce narrative-like structures for each discourse type. Their narrations, further, are commentaries.

Summary

This study has observed the writing of urban school students within the confines of forty minute writing periods. The writing tasks appear to be typical school writing tasks. The resulting products reflect characteristics of the tasks and the time limitations. They also reflect characteristics of the particular population in question.

Hunt (1965) observed the writing of 4th, 8th, and 12th grade subjects from the Florida State University School. He observed that 8.6, 11.5, and 14.4 W/T were produced respectively. These have come to be considered developmental norms in syntactic complexity (Combs, 1975; Stotsky, 1975). Eleventh grade subjects

in this study across the three discourse modes produced a mean W/T of 8.81 (Description=9.50, Argument=8.06, and Narration=8.87) which is only slightly higher than the W/T noted by Hunt for 4th grade subjects. Subjects in the present study wrote within a prescribed time limit while Hunt collected products containing at least a thousand words. The writing tasks in the present study did not require the production of a specific number of words but, rather placed a limit on the writing period and in effect a limit on the number of words it was possible to write. Crowhurst & Piche (1979, p. 107) point out that since discourse mode appears related to syntactic complexity "the need for norms differentiated by mode of discourse is obvious." Findings of this study would suggest the need for a consideration of an additional variable, group.

It is suggested here that urban school students writing within the confines of forty minute periods produce writing products that reflect a "narrative" style of writing. It is, further, suggested that the narrative-like writing style of these subjects resulted in no differences in syntactic complexity across discourse modes. Findings of this study suggest tentative descriptions of the writing of urban inner-city students. They suggest the need for further investigation into the interaction of mode of discourse by population.

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TABLE ONE 19

Means and Standard Deviations of Quality Index For Three Discourse Modes

Grade		Discourse Mode		
		Description	Argument	Narration
2nd	$\bar{X}$	7.15	8.00	7.80
	sd	3.25	3.06	3.58
5th	$\bar{X}$	8.00	7.95	8.05
	sd	3.30	3.22	3.60
8th	$\bar{X}$	8.25	8.55	8.45
	sd	3.51	3.33	2.93
11th	$\bar{X}$	7.85	8.05	8.15
	sd	3.63	3.05	3.21

TABLE TWO

Means and Standard Deviations of The Number of Words For Three Discourse Modes

Grade		Discourse Mode		
		Description	Argument	Narration
2nd	$\bar{X}$	49.90	54.05	31.25
	sd	45.62	20.60	13.71
5th	$\bar{X}$	65.25	64.80	42.90
	sd	32.85	31.90	16.45
8th	$\bar{X}$	84.70	78.60	62.65
	sd	33.44	70.83	16.91
11th	$\bar{X}$	131.05	130.05	118.00
	sd	60.61	52.85	60.51

TABLE THREE

Correlations Between Quality and Number of Words For Three Discourse Modes

Grade	Discourse Mode		
	Description	Argument	Narration
2	.87	.80	.84
5	.75	.80	.83
8	.91	.75	.90
11	.60	.82	.75

TABLE FOUR

Means and Standard Deviations of
T-units for Three Discourse Modes

Grade		Discourse Mode		
		Description	Argument	Narration
2nd	$\bar{X}$	7.60	8.65	5.25
	sd	3.63	3.48	1.91
5th	$\bar{X}$	9.30	8.90	5.80
	sd	4.70	3.45	1.87
8th	$\bar{X}$	9.85	8.10	9.10
	sd	4.99	3.59	3.86
11th	$\bar{X}$	14.40	16.40	13.20
	sd	6.91	6.56	5.12

TABLE FIVE

Means and Standard Deviation of Words/T-unit For Three Discourse Modes

Grade		Discourse Mode		
		Description	Argument	Narration
2nd	$\bar{X}$	6.72	6.24	5.89
	sd	1.55	2.07	.94
5th	$\bar{X}$	7.08	7.24	7.47
	sd	1.71	1.40	1.67
8th	$\bar{X}$	9.23	9.7	8.14
	sd	2.13	7.50	2.26
11th	$\bar{X}$	9.50	8.06	8.87
	sd	1.97	1.47	2.35

TABLE SIX

Correlations Between Quality and W/T
for Three Discourse Modes

Grade	Discourse Mode		
	Description	Argument	Narration
2	.52*	.01	.39
5	.39	-.22	.43*
8	-.18	-.20	.44*
11	-.02	-.01	.47*

* Significant at alpha .05

Footnotes

[1]Narration Stimulus